

WILDLIFE DIVERSITY E-NEWS  
Iowa Department of Natural Resources  
Jeff Vonk, Director  
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Welcome to the first 2006 issue of the WILDLIFE DIVERSITY E-NEWS. We don't pass along information to our supporters about happenings with our program nearly as often as we'd like, but at least two or three times a year we attempt to keep you posted through this electronic newsletter. We have some exciting new things to report in this issue, including updates on program funding, the Iowa Wildlife Action Plan, and more. Most importantly, we are delighted to have a new staff person on board. Stephanie Shepherd has replaced Mark McInroy, who transferred to work with upland game in the Wildlife Research Bureau. Stephanie will introduce herself in the lead story, but suffice it to say we are excited to have her expertise in data management, butterflies, and restoration ecology added to our program's expertise. We hope you'll have a chance to meet Stephanie soon--she is a bright young face among us aging "boomers" who have been around for more than just a few years!

--Doug Harr, Editor

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OF VIRGINIA, IOWA, BUTTERFLIES AND PRAIRIES  
By Stephanie Shepherd

This is my second tenure in Iowa. I am a native of Virginia and during my first sojourn here from 2001 to 2003, I was frequently asked how I ended up in Iowa. My answer was very simple: I was and am very interested in Restoration Ecology, and there are few better places to explore this interest than Iowa.

Restoration Ecology is a relatively new discipline roughly falling into the arena of conservation biology. I would informally define it as the study and practice of recreating ecosystems either by improving a degraded natural area or by creating a natural area from bare ground (referred to as reconstruction). The Iowa landscape provides a perfect template for studying and practicing grassland restoration and reconstruction.

I began my graduate studies at Iowa State University under Dr. Diane Debinski to study how to assess the success of reconstructed prairies. The chief objective was to judge whether reconstructed prairies not only looked like prairie with all the appropriate plant species, but also functioned like prairie with all appropriate animal species. Since it would have been too much to look at all animals, we focused on butterflies.

Butterflies are an important part of the prairie landscape. They are tightly tied to the plant community through their role as herbivores and pollinators. By examining butterfly communities we hoped to determine whether reconstructed prairies were successful in developing into functioning prairie.

The first part of this project included surveying butterflies and plants on 36 remnant and reconstructed prairies around central Iowa. We found that, in general, reconstructed prairies had less diversity of plants and butterflies when compared to remnant prairies. However, large scale reconstructed prairie such as at Neal Smith National Wildlife Refuge was more successful in developing a full butterfly community than smaller reconstructions isolated by non-grassland. In addition, reconstructions planted with higher plant diversity supported slightly higher butterfly diversity.

For the second part of our project, we examined whether a prairie specialist butterfly, the regal fritillary, could be reintroduced and become established on a reconstructed prairie (Neal Smith NWR). Regal fritillaries are large beautiful butterflies which depend exclusively on blue prairie or birds-foot violets for their caterpillar's host plant. These particular violets are only found on high quality prairies. Regals have been declining in numbers along with their shrinking prairie habitat.

We moved several female regals from Ringgold Wildlife area in southern Iowa to Neal Smith NWR and placed them in mesh cages over planted patches of blue prairie violets. In July 2002, we caught our first free-flying regal fritillary at Neal Smith NWR. Over that summer we caught an additional 16, and had 84 observations widely spaced over the refuge. Sightings and captures of regal fritillaries have continued over the last few years, and things look hopeful for establishment of this species at Neal Smith. Thus far our conclusion has been that good quality reconstructions, which could prove crucial in saving threatened prairie species who are suffering from the decline of native prairies, can support prairie-specific butterfly species.

I am excited to return to Iowa and work with the Wildlife Diversity team. It is an opportunity to do what I love in a place that I love. In my first month with the wildlife diversity program, I've done work associated with trumpeter swans, frogs, toads, bald eagles, and American kestrels. Working with these diverse species illustrates exactly why we are called the Wildlife Diversity program and also highlights Iowa's great diversity which is truly worth working toward.

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## GREAT BACKYARD BIRD COUNT FEB. 17-20

The Great Backyard Bird Count is coming up this weekend, February 17-20. It needs your help, and information about the GBBC and how to participate may be found at website <http://www.birdsource.org/gbbc/>.

In 2005, Iowa only had 568 feeders reporting. For example, just 9 reports were from Iowa City, 4 from Solon, 2 from North Liberty, and a whopping 0 from Coralville. The last year we ran the statewide feeder survey we had nearly twice that number. We can do better, and it is easy. You don't have to sit at your feeder all day, just watch it as you go past and take a quick count. It is supposed to be cold this weekend, so birds will be using their feeders.

These were the Iowa birds reported on last year's GBBC: Greater White-fronted Goose, Snow Goose, Canada Goose, Trumpeter Swan, Wood Duck, American Wigeon, American Black Duck, Mallard, Northern Shoveler, Northern Pintail, Canvasback, Redhead, Ring-necked Duck, Lesser Scaup, Bufflehead, Common Goldeneye, Hooded Merganser, Common Merganser, Ring-necked Pheasant, Wild Turkey, Northern Bobwhite, Pied-billed Grebe, American White Pelican, Great Blue Heron, Bald Eagle, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Red-shouldered Hawk, Red-tailed Hawk, Rough-legged Hawk, American Kestrel, Merlin, American Coot, Killdeer, Ring-billed Gull, Herring Gull, Rock Pigeon, Eurasian Collared-Dove, Mourning Dove, Eastern Screech-Owl, Great Horned Owl, Northern Hawk Owl, Barred Owl, Long-eared Owl, Northern Saw-whet Owl, Belted Kingfisher, Red-headed Woodpecker, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Northern Flicker, Pileated Woodpecker, Blue Jay, American Crow, Horned Lark, Black-capped Chickadee, Tufted Titmouse, Red-breasted Nuthatch, White-breasted Nuthatch, Brown Creeper, Carolina Wren, Winter Wren, Eastern Bluebird, American Robin, European Starling, Cedar Waxwing, American Tree Sparrow, Song Sparrow, White-throated Sparrow, Harris's Sparrow, White-crowned Sparrow, Dark-eyed Junco, Lapland Longspur, Snow Bunting, Northern Cardinal, Red-winged Blackbird, Western Meadowlark, Rusty Blackbird, Common Grackle, Great-tailed Grackle, Brown-headed Cowbird, Purple Finch, House Finch, Red Crossbill, Common Redpoll, Pine Siskin, American Goldfinch, House Sparrow, and Eurasian Tree Sparrow.

Are you seeing something not on the list? Make your mark at <http://www.birdsource.org/gbbc/>. (A BIG THANKS to Rick Hollis, of the Iowa Ornithologists Union for providing this information!)

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## IOWA WILDLIFE ACTION PLAN TO BE UNVEILED

By Doug Harr

For nearly two and one-half years Iowa DNR and several conservation partners have been toiling to complete the Iowa Comprehensive Wildlife Plan. This strategic plan for wildlife diversity is required by Congress of all 50 states and six US territories receiving State Wildlife Grant funds. Iowa has been given a provisional approval status for our plan, and it is currently under revision for final approval.

The International Association of Fish and Wildlife Agencies has led efforts to coordinate development and unveiling of all 56 plans, and with the help of polling and marketing experts has advised states on communicating the nationwide roll-out to the public, the media, and-most importantly-Congress. One key purpose of all the states' wildlife action plans is to demonstrate to Congress just how much work remains to be done for declining wildlife, and that states can't do the job without some assurance of better funding in the future.

As you'll read elsewhere in this newsletter, Iowa DNR is now rebuilding the Teaming With Wildlife (TWW) coalition of conservation partners that had worked to support funding legislation in the late 1990s. We were almost there when the tragedy of 9/11 occurred and many pending bills were shelved in order to fund improved national security. But with completed wildlife action plans in hand, and a great track record of projects using the annual State Wildlife Grant appropriations, we believe the opportunity is nearing for permanent funding of wildlife diversity programs.

Later this spring or summer we plan to release a new full-color publication explaining the Iowa Wildlife Action Plan in simple language. We are also completing a PowerPoint presentation that will be available on CD for any group to use, and we will be able to mail that upon request. The Iowa Conservationist magazine will run a feature article about the Wildlife Action Plan, and the complete plan pages, soon will be available in multiple .pdf files for easy downloading from the DNR Wildlife Diversity web page.

The Iowa Wildlife Action Plan will be a great tool for every organization, agency, educator or individual to use in partnership with DNR, to promote our common goals of "keeping common species common" and restoring populations of rare or declining wildlife. The plan was designed to be used by all Iowans, and to benefit all Iowans. We hope you will find it useful in your own wildlife conservation efforts.

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## A LONGING FOR WILDERNESS OR WILDNESS

By Bruce Ehresman

I am glad to say that there is an important discussion happening in Iowa concerning WILDNESS. There is a growing concept called the Iowa Connectivity Project that celebrates wildness and is exploring the possibilities of re-connecting animal populations to other animal populations, re-connecting humans to nature, creating corridors for bridging gaps - gaps between people and the land, the natural. Please keep your eyes and ears open for information, events, and happenings about wildness and the Iowa Connectivity Project.

Here are some words to consider written by a champion for wild places, Sigurd Olson, from a chapter he called "A Longing for Wilderness."

"We enjoy comforts never known before, but they are not enough; somehow, somehow, we must make contact with naturalness, the source of all life. The frontiers are still too close to forget and the memory of wilderness goes far back into the eons when humans lived close to the earth and was in tune with the ancient rhythms. We still listen to the song of the wilderness and long for a land we have lost. Civilization has not changed emotional needs, which were ours long before it arose. This is the reason for the hunger, this is the true meaning of wilderness and the search of moderns for places where they can know it again. The battle to save the last remnants is not only a struggle for freedom and beauty, but for the spirit of humans in a world that seems to have lost its balance and perspective."

The author Wallace Stegner warned some years ago, "Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed, if we permit the last virgin forests to be turned into comic books and plastic cigarette cases; if we drive the few remaining members of a wild species into zoos or to extinction; if we pollute the last clean air and dirty the last clean streams and push our paved roads through the last of the silence.... The reassurance that wilderness is still there is good for our spiritual health even if we never once in 10 years set foot in it."

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#### LICENSE PLATES, CHICKADEE CHECKOFF AND NONGAME CERTIFICATES-- FUNDING THE PROGRAM By Doug Harr

The Wildlife Diversity Program is finally growing, thanks to the funding sources now available. Three sources are providing most of our program dollars at present, and we are proud that so many concerned citizens have supported our work through their voluntary contributions and purchases. Here's a quick review of each source and how you can help.

- Natural Resource License plates--also known as "REAP" license plates--a new fee structure now earmarks part of the sale or renewal of every license plate specifically for Wildlife Diversity. This does not appear as part of our operational budget, but rather is used for special projects and as match for State Wildlife Grants received by annual Congressional appropriation. We're excited because we have been allowed to produce two new license designs--a Bald Eagle and a Ring-necked Pheasant--to accompany the popular American Goldfinch and wild rose plate. Purchasing any one of these plates gives \$10 to Wildlife Diversity for a new license purchase, and \$15 each time it is annually renewed. It's even possible to buy gift certificates from your County Treasurer's office, so that you can give one of these beautiful plates as a gift.

- "Chickadee Checkoff"--Anyone may donate to the Wildlife Diversity Program by designating a portion of their Iowa income tax refund to be withheld for that purpose. Look for the "Fish & Wildlife Fund" line on Iowa tax form 1040 (all contributions marked on this line go only to Wildlife Diversity). Ask your tax preparer, or contact [Stephanie.shepherd@dnr.state.ia.us](mailto:Stephanie.shepherd@dnr.state.ia.us), for more information.

- Nongame Support Certificate--the 2006 limited edition photo print, this time depicting a Blanding's Turtle, is now available from DNR for \$5. You may order it from our Wildlife Diversity staff at the Boone Wildlife Research Station, through DNR headquarters in Des Moines, or purchase it from the DNR booth at various wildlife watching events around the state. Through March we can still also offer the 2005 certificate, featuring an American White Pelican in flight.

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#### WINTER FEEDERS AND FEEDING STRATEGIES By Pat Schlarbaum

Although more and more is being learned about which seeds birds prefer, less data is available about the effect that bird feeding has on bird survival. Opinions on bird feeding range from bird feeding having little effect on winter survival to birds depending on the feeders to survive. Recent research suggests that to understand feeding, we have to look at the overall survival strategy of birds.

Birds in general have a higher metabolism than mammals. This means their body temperature is higher (101 to 112 degrees F), they have a faster heart and respiration rate, and they convert food into body energy faster. This also means that to maintain their body energy they have to eat frequently and consume a lot. Unlike most mammals that can miss a day's meal, birds must eat every day. Tests have shown that at cold temperatures, some birds can only survive about as long as an average winter's night without feeding. During the winter birds must eat enough to replenish their energy,

plus build a reserve to survive the night. Chickadees go from little or no fat left in the morning to eating enough to have a fat reserve before going to roost for the night. (Talk about yo-yo dieting!)

To reduce heat loss from the body surface, a bird's bill is actually horn-like material (no frost-bitten noses) and their legs and feet are tendonous instead of fleshy like a mammal's. Feathers insulate the birds and retain heat. Birds can easily adjust their temperature by fluffing or sleeking their feathers. Some birds like chickadees, can conserve energy by dropping their daytime temperature from about 108 degrees F to 88 degrees F during the night. Birds also find a place out of the wind, or roost together to save energy during the night.

So how do feeders work into a bird's survival strategy? Research on black-capped chickadees in Wisconsin has found that chickadees consumed from 14 to 29 percent of their daily energy requirement from bird feeders. Chickadees that had home ranges close to feeders used the feeders more frequently. Feeders were also used by more chickadees as sunset approached than at sunrise.

Although the feeders provided a rich food patch, the chickadees still sought other sources of food in different places. The birds still consumed about 80 percent of their energy requirement from natural sources. This may be a mechanism to "monitor" the amount of food in a variety of patches. If a winter storm would destroy one food patch, the bird would still know of other areas to feed. Avoiding dependence on just one food source would help the bird's long-term survival.

Birds living closer to the feeders, used them more frequently but still did not get more than 30 percent of their daily energy requirement from the feeders. Birds traveling a long distance to the feeders would burn more energy en route so it would not be worth the energy cost to travel back and forth as frequently as the nearby birds. Using the feeders near sunset would be a logical way to maximize caloric intake, to have a high fat reserve to survive the night.

Although you would expect bird use to increase as the temperatures dropped, the chickadees used another strategy. Instead of feeding more, they conserved energy by leaving the roost later, spending more time during the day being motionless and returning to the roost earlier. Of course they still ate, but spent less energy moving.

Feeders are part of a bird's feeding strategy, but they are using a variety of natural food in a variety of locations. In an urban area, where less natural food is available, they might rely more heavily on feeders, but they are probably using a variety of feeders and natural foods throughout the neighborhood. Monitoring a variety of food sources, aids the birds long-term survival as food is destroyed or runs out during the course of the winter.

Providing an array of feeder opportunities year round will offer your family and friends a wonderful pastime. Stable or consistent feeding regimes will have a positive effect upon songbirds during nesting seasons. In summer while enjoying Iowa's great outdoors the call of your community songbirds is most appealing. And, the chance to see young-of-the-year with their adults at feeding stations provide wonderful sights to behold.

Lastly, but most importantly, consider providing water in your backyards. Bird shops offer birdbath heaters for year round offerings of this most critical habitat requirement. In conjunction with critical habitat needs for wildlife that include food and water, cover addresses their needs. A variety of natural plantings from prairie to pines, and shrubs like ninebark, and hazelnut provide ideal natural cover and added food sources.

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#### OF BALD EAGLES AND BARN OWLS by Bruce Ehresman

For those that follow the status of some of Iowa's nesting raptors, I think it is time for a brief update. I will start with Bald Eagle. Although unable to monitor Iowa's eagle nests to the extent we once did, Iowa's Wildlife Diversity Program continues to record all eagle nest locations and production information for many nests. It appears that eagle nesting numbers are starting to level off, since the very best available eagle nesting habitat appears to already be occupied. Our conservative estimate of "active" eagle nests in 2005 was 190, up from 175 active nests in 2004. Since many of Iowa's prime eagle nest site trees are already taken, eagles are now nesting closer and closer to human habitation, where some gigantic cottonwood trees and potential nest sites occur. Examples of this are recent nest sites discovered along the Skunk River in Ames and along the Des Moines River in Des Moines. At least 71 Iowa counties now have confirmed eagle nests, and the most recent counties to report nests are Marshall, Polk, Story, and Kossuth.

Bald Eagle nesting in 2006 already is well under way, and our office has received phone calls and emails from across the state notifying of eagle pairs busily rebuilding nests. By the time you read this, there will be a number of eagles already incubating eggs. Since DNR staff can no longer monitor so many eagle nests, we very much appreciate any information that you can provide about our nesting eagles. Volunteers in Ames did a wonderful job keeping tabs on the eagles nesting in that town last year, and we welcome others to monitor eagle nests, as well.

Now let's discuss Barn Owls. I am happy to say that 2005 appears to be the best nesting year for Iowa Barn Owls since 1995. There were 7 confirmed Barn Owl nests this last year in 7 different counties, with at least 26 Barn Owl young produced. The 7 counties with nests include Tama, Lucas, Jones, Adair, Page, Taylor, and Mahaska. There was an

unconfirmed report of a second nest in Adair County. As testimony to the fact that Barn Owls are wintering here, there were 2 road-killed Barn Owls retrieved in December, one each from Audubon and Guthrie counties, plus a third Barn Owl was found dead near Ankeny (Polk County) in early January 2006. Since this species is especially adversely affected by cold winters with deep snow, perhaps the effects of global warming are benefitting it. If this mild winter continues and if southern Iowa experiences a moist weather year (meadow voles – a favorite prey item – breed rapidly in wet years), Barn Owl populations should continue to grow. As with Bald Eagles, the Wildlife Diversity Program very much encourages folks to report Barn Owl nests, as well as sightings of Barn Owls. Two of the nests reported last year were in Barn Owl nest boxes, and we are encouraged by the success of those who are willing to put up nest boxes for this species.

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